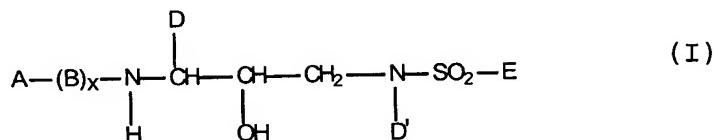


Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

Claim 1 (currently amended): A compound of formula I:



wherein:

A is selected from the group consisting of H, Het, ~~R<sup>1</sup>-Het~~, ~~-R<sup>1</sup>-C<sub>1</sub>-C<sub>6</sub> alkyl~~, which may be optionally substituted with one or more groups selected from the group consisting of hydroxy, C<sub>1</sub>-C<sub>4</sub> alkoxy, Het, ~~O-Het~~, ~~-NR<sup>2</sup>-CO-N(R<sup>2</sup>) (R<sup>2</sup>)~~ and ~~-CO-N(R<sup>2</sup>) (R<sup>2</sup>)~~; and ~~R<sup>1</sup>-C<sub>2</sub>-C<sub>6</sub> alkenyl~~, which may be optionally substituted with one or more groups selected from the group consisting of hydroxy, C<sub>1</sub>-C<sub>4</sub> alkoxy, Het, ~~O-Het~~, ~~NR<sup>2</sup>-CO-N(R<sup>2</sup>) (R<sup>2</sup>)~~ and ~~CO-N(R<sup>2</sup>) (R<sup>2</sup>)~~; each R<sup>1</sup> is independently selected from the group consisting of -C(O)-, -S(O)<sub>2</sub>-, -C(O)-C(O)-, -O-C(O)-, -O-S(O)<sub>2</sub>, -NR<sup>2</sup>-S(O)<sub>2</sub>-, -NR<sup>2</sup>-C(O)- and -NR<sup>2</sup>-C(O)-C(O)-;

each Het is independently selected from the group consisting of C<sub>3</sub>-C<sub>7</sub> cycloalkyl; C<sub>5</sub>-C<sub>7</sub> cycloalkenyl; C<sub>6</sub>-C<sub>10</sub> aryl; and 5-7 membered saturated or unsaturated heterocycle, containing one ~~or more~~ heteroatoms heteroatom selected from N, N(R<sup>2</sup>), O, S and S(O)<sub>n</sub>, wherein said heterocycle may optionally be benzofused; and wherein any member of said Het may be optionally substituted with one or more substituents selected from the group consisting of oxo, -OR<sup>2</sup>, -R<sup>2</sup>, -N(R<sup>2</sup>)(R<sup>2</sup>), -R<sup>2</sup>-OH, -CN, -CO<sub>2</sub>R<sup>2</sup>, -C(O)-N(R<sup>2</sup>)(R<sup>2</sup>), -S(O)<sub>2</sub>-N(R<sup>2</sup>)(R<sup>2</sup>), -N(R<sup>2</sup>)-C(O)-R<sub>2</sub>, -C(O)-R<sup>2</sup>, -S(O)<sub>n</sub>-R<sup>2</sup>, -OCF<sub>3</sub>, -S(O)<sub>n</sub>-Ar, methylenedioxy, -N(R<sup>2</sup>)-S(O)<sub>2</sub>(R<sup>2</sup>), halo, -CF<sub>3</sub>, -NO<sub>2</sub>, Ar and -O-Ar;

each R<sup>2</sup> is independently selected from the group consisting of H and C<sub>1</sub>-C<sub>3</sub> alkyl optionally substituted with Ar; with the proviso that when R<sup>2</sup> is C<sub>1</sub>-C<sub>3</sub> alkyl substituted with Ar, said Ar may not be substituted with an Ar-containing moiety;

B, when present, is -N(R<sup>2</sup>)-C(R<sup>3</sup>)(R<sup>3</sup>)-C(O)-;

x is 0 or 1;

each R<sup>3</sup> is independently selected from the group consisting of H, Het, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl and C<sub>5</sub>-C<sub>6</sub> cycloalkenyl, wherein any member of said R<sup>3</sup>, except H, may be optionally substituted with one

or more substituents selected from the group consisting of  $-OR^2$ ,  $-C(O)-NH-R^2$ ,  $-S(O)_n-N(R^2)(R^2)$ , Het,  $-CN$ ,  $-SR^2$ ,  $-CO_2R^2$ ,  $NR^2-C(O)-R^2$ ;

each n is independently 1 or 2;

D and D' are independently selected from the group consisting of Ar; C<sub>1</sub>-C<sub>4</sub> alkyl, which may be optionally substituted with one or more groups selected from C<sub>3</sub>-C<sub>6</sub> cycloalkyl,  $-OR_2$ ,  $-R^3$ ,  $-O-Ar$  and Ar; C<sub>2</sub>-C<sub>4</sub> alkenyl, which may be optionally substituted with one or more groups selected from the group consisting of C<sub>3</sub>-C<sub>6</sub> cycloalkyl,  $-OR^2$ ,  $-R^3$ ,  $-O-Ar$  and Ar; C<sub>3</sub>-C<sub>6</sub> cycloalkyl, which may be optionally substituted with or fused with Ar; and C<sub>5</sub>-C<sub>6</sub> cycloalkenyl, which may be optionally substituted with or fused with Ar;

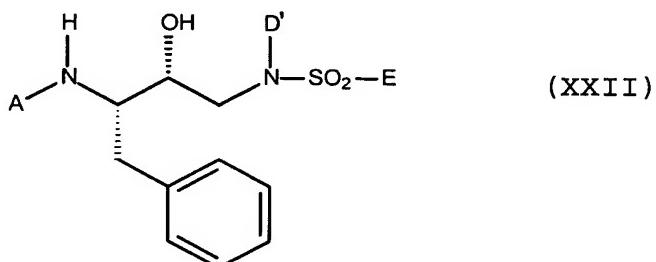
each Ar is independently selected from the group consisting of phenyl; 3-6 membered carbocyclic ring and 5-6 membered heterocyclic ring containing one or more heteroatoms selected from O, N, S, S(O)<sub>n</sub> and N(R<sup>2</sup>), wherein said carbocyclic or heterocyclic ring may be saturated or unsaturated and optionally substituted with one or more groups selected from the group consisting of oxo,  $-OR^2$ ,  $-R^2$ ,  $-N(R^2)(R^2)$ ,  $-N(R^2)-C(O)-R^2$ ,  $-R^2-OH$  C<sub>1</sub>-C<sub>3</sub> alkyl substituted with -OH and optionally substituted

with Ar, -CN, -CO<sub>2</sub>R<sup>2</sup>, -C(O)-N(R<sup>2</sup>)(R<sup>2</sup>), halo and -CF<sub>3</sub>;

E is selected from the group consisting of Het; O-Het; Het-Het; -O-R<sup>3</sup>; -NR<sup>2</sup>R<sup>3</sup>; C<sub>1</sub>-C<sub>6</sub> alkyl, which may be optionally substituted with one or more groups selected from the group consisting of R<sup>4</sup> and Het; C<sub>2</sub>-C<sub>6</sub> alkenyl, which may be optionally substituted with one or more groups selected from the group consisting of R<sup>4</sup> and Het; C<sub>3</sub>-C<sub>6</sub> saturated carbocycle, which may optionally be substituted with one or more groups selected from the group consisting of R<sup>4</sup> and Het; and C<sub>5</sub>-C<sub>6</sub> unsaturated carbocycle, which may optionally be substituted with one or more groups selected from the group consisting of R<sup>4</sup> and Het; and

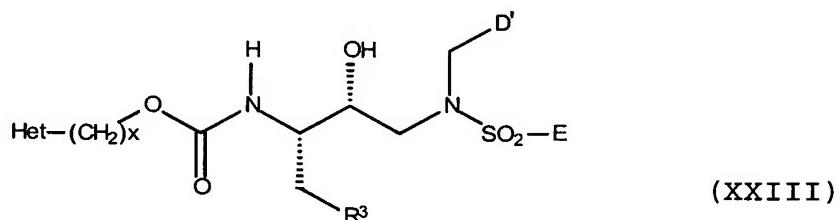
each R<sup>4</sup> is independently selected from the group consisting of -OR<sup>2</sup>, -C(O)-NHR<sup>2</sup>, -S(O)<sub>2</sub>-NHR<sup>2</sup>, halo, -NR<sup>2</sup>-C(O)-R<sup>2</sup> and -CN.

Claim 2 (original): The compound according to claim 1, characterized in that said compound has the structure of formula XXII:



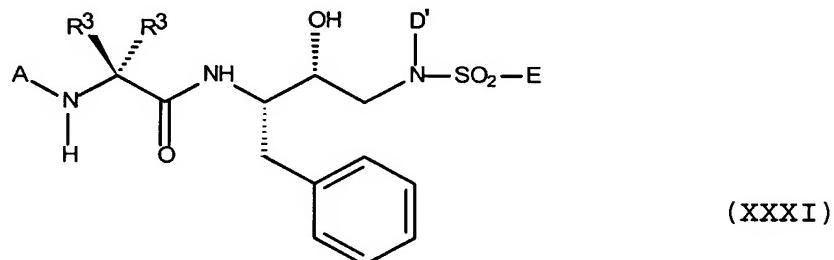
and A, D' and E are defined as in claim 1.

Claim 3 (original): The compound according to claim 1, characterized in that said compound has the structure of formula XXIII:



and x, Het, R<sup>3</sup>, D' and E are defined as in claim 1.

Claim 4 (original): The compound according to claim 1, characterized in that said compound has the structure of formula XXXI:



and A, R<sup>3</sup>, D' and E are defined as in claim 1.

Claim 5 (currently amended): A compound of formula I, wherein:

A is selected from the group consisting of H, -R<sup>1</sup>-Het, -R<sup>1</sup>-C<sub>1</sub>-C<sub>6</sub> alkyl, which may be optionally substituted with one or more groups selected from the group consisting of hydroxy, C<sub>1</sub>-C<sub>4</sub> alkoxy, Het and -O-Het, and -R<sup>1</sup>-C<sub>2</sub>-C<sub>6</sub> alkenyl, which may be optionally substituted with one or more groups selected from hydroxy, C<sub>1</sub>-C<sub>4</sub> alkoxy, Het and -O-Het;

each R<sup>1</sup> is independently selected from the group consisting of -C(O)-, -S(O)<sub>2</sub>-, -C(O)-C(O)-, -O-CO-, -O-S(O)<sub>2</sub>- and -NR<sup>2</sup>-S(O)<sub>2</sub>-;

each Het is independently selected from the group consisting of C<sub>3</sub>-C<sub>7</sub> cycloalkyl; C<sub>5</sub>-C<sub>7</sub> cycloalkenyl; C<sub>6</sub>-C<sub>10</sub> aryl; and 5-7 membered saturated or unsaturated heterocycle, containing one or more heteroatoms heteroatom selected from N, O and S, which may optionally be benzofused; wherein any member of said Het may be optionally substituted with one or more substituents selected from the group consisting of oxo, -OR<sup>2</sup>, -R<sup>2</sup>, -N(R<sup>2</sup>)<sub>2</sub>, -R<sup>2</sup>-OH, -CN, -CO<sub>2</sub>R<sup>2</sup>, -C(O)-N(R<sup>2</sup>)<sub>2</sub> and -S(O)<sub>2</sub>-N(R<sup>2</sup>)<sub>2</sub>;

each R<sup>2</sup> is independently selected from the group consisting of H and C<sub>1</sub>-C<sub>3</sub> alkyl;

B, when present, is -NH-CH(R<sup>3</sup>)-C(O)-;

x is 0 or 1;

R<sup>3</sup> is selected from the group consisting of Het, C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>3</sub>-C<sub>6</sub> cycloalkyl and C<sub>5</sub>-C<sub>6</sub> cycloalkenyl, wherein any member of said R<sup>3</sup> may be optionally substituted with one or more substituents selected from the group consisting of -OR<sup>2</sup>, -C(O)-NH-R<sup>2</sup>, -S(O)<sub>n</sub>-N(R<sup>2</sup>)<sub>2</sub>, Het and -CN;

n is 1 or 2;

D and D' are independently selected from the group consisting of Ar; C<sub>1</sub>-C<sub>4</sub> alkyl, which may be optionally substituted with C<sub>3</sub>-C<sub>6</sub> cycloalkyl or Ar; C<sub>2</sub>-C<sub>4</sub> alkenyl, which may be optionally substituted with C<sub>3</sub>-C<sub>6</sub> cycloalkyl or Ar; C<sub>3</sub>-C<sub>6</sub> cycloalkyl, which may be optionally substituted or fused with Ar; and C<sub>5</sub>-C<sub>6</sub> cycloalkenyl, which may be optionally substituted or fused with Ar; ~~with the proviso that when D is attached to N, D may not be methyl or C<sub>2</sub> alkenyl,~~

Ar is selected from the group consisting of phenyl; 3-6 membered carbocyclic ring and 5-6 membered heterocyclic ring containing one or more heteroatoms selected from O, N and S, wherein said carbocyclic or heterocyclic ring may be saturated or unsaturated and optionally substituted with one or more groups selected from the group consisting of oxo, -OR<sup>2</sup>, -R<sup>2</sup>, -N(R<sup>2</sup>)<sub>2</sub>,

-N(R<sup>2</sup>)-C(O)R<sup>2</sup>, -R<sup>2</sup>-OH, -CN, -CO<sub>2</sub>R<sup>2</sup>, -C(O)-N(R<sup>2</sup>)<sub>2</sub>, halo and

-CF<sub>3</sub>;

E is selected from the group consisting of Het;  
-O-R<sup>3</sup>; -NR<sup>2</sup>R<sup>5</sup>; C<sub>1</sub>-C<sub>6</sub> alkyl, which may be optionally substituted with one or more R<sup>4</sup> or Het; C<sub>2</sub>-C<sub>6</sub> alkenyl, which may be optionally substituted with one or more R<sup>4</sup> or Het; C<sub>3</sub>-C<sub>6</sub> saturated carbocycle, which may optionally be substituted with one or more R<sup>4</sup> or Het; and C<sub>5</sub>-C<sub>6</sub> unsaturated carbocycle, which may optionally be substituted with one or more R<sup>4</sup> or Het;

each R<sup>4</sup> is independently selected from the group consisting of -OR<sup>2</sup>, -C(O)-NHR<sup>2</sup>, -S(O)<sub>2</sub>-NHR<sup>2</sup>, halo and -CN;  
and

each R<sup>5</sup> is independently selected from the group consisting of H and R<sup>3</sup>, ~~with the proviso that at least one R<sup>5</sup> is not H.~~

Claim 6 (canceled).

Claim 7 (original): The compound according to claim 3,  
wherein:

R<sup>3</sup> is selected from the group consisting of C<sub>1</sub>-C<sub>6</sub> alkyl, C<sub>2</sub>-C<sub>6</sub> alkenyl, C<sub>5</sub>-C<sub>6</sub> cycloalkyl, C<sub>5</sub>-C<sub>6</sub> cycloalkenyl and a 5-6 membered saturated or unsaturated

heterocycle, wherein any member of said R<sup>3</sup> may optionally be substituted with one or more substituents selected from the group consisting of -OR<sup>2</sup>, -C(O)-NH-R<sup>2</sup>, ~~-S(O)<sub>n</sub>N(R<sup>2</sup>)(R<sup>2</sup>)<sub>2</sub>~~, -S(O)<sub>n</sub>N(R<sup>2</sup>)(R<sup>2</sup>), Het, -CN, -SR<sup>2</sup>, -C(O)<sub>2</sub>R<sup>2</sup>, NR<sup>2</sup>-C(O)-R<sup>2</sup>; and

D' is selected from the group consisting of C<sub>1</sub>-C<sub>3</sub> alkyl and C<sub>3</sub> alkenyl, wherein said alkyl or alkenyl may optionally be substituted with one or more groups selected from the group consisting of C<sub>3</sub>-C<sub>6</sub> cycloalkyl, -OR<sup>2</sup>, -O-Ar and Ar.

Claims 8-10 (canceled).

Claim 11 (original): The compound according to claim 1, wherein said compound has a molecular weight less than or equal to about 700 g/mol.

Claim 12 (original): A compound according to claim 11, wherein said compound has a molecular weight less than or equal to about 600 g/mol.

Claims 13-15 (canceled).

Claim 16 (currently amended): A pharmaceutical composition effective against viral infection comprising a pharmaceutically effective amount of a compound

according to any one of claims 1-4 and ~~13-14~~ and a pharmaceutically acceptable carrier, adjuvant or vehicle.

Claim 17 (original): The pharmaceutical composition according to claim 16, further comprising an additional anti-viral agent.

Claim 18 (currently amended): A method of using a compound according to any one of claims 1-4 and ~~13-14~~ as a therapeutic agent against viral infection, said virus requiring an aspartyl protease for an obligatory life cycle event.

Claim 19 (original): The method according to claim 18, wherein said virus is HIV-1, HIV-2, or HTLV.

Claim 20 (currently amended): The use according to any one of claims 1-4 and ~~13-14~~, for inhibiting enzymatic activity in an aspartyl protease.

Claim 21 (original): The use according to claim 20, wherein said aspartyl protease is HIV protease.

Claim 22 (original): A method for preventing HIV infection in a mammal comprising the step of administering to said mammal a pharmaceutically effective

amount of a pharmaceutical composition according to claim 16 or 17.

Claim 23 (original): A method for treating HIV infection in a mammal comprising the step of administering to said mammal a pharmaceutically effective amount of a pharmaceutical composition according to claim 16 or 17.

Claim 24 (original): The method according to claim 22 or 23, wherein said step of administering comprises oral administration or administration by injection.

Claims 25-27 (canceled).